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ABSTRACT

The Michigan Educational Assessment Program and its contribution to the improvement of education in the state are described in this report. The Program provides local and state educational decision-makers with necessary information on human and financial resources and student attainment of sets of performance objectives thought to be necessary for students in the state. The educational assessment provides data useful in determining specific areas of academic need in the basic skills for individual students, classrooms, schools, and the entire state. The Michigan Educational Assessment Program is being improved and expanded to provide even better informational services to the state's educational system in the future. More complete testing of all learning areas will be done in future years and the program will be expanded to include grades one, four, seven, ten, and twelve. The ultimate goal of the Michigan Educational Assessment Program is to help assure that all Michigan pupils will attain in the basic skills. (Author/DEP)

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# EDUCATIONAL ASSESSMENT: THE MICHIGAN PLAN

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## FOREWORD

Since its beginnings in 1969, the Michigan Educational Assessment Program (MEAP) has developed into a program which supplies information to decision-makers at all levels, from the individual parent to the state legislature. As might be expected from such a large scale effort, the MEAP has had an exciting history of discovery and change--for example, the change in 1973-74 from norm-referenced to objective-referenced testing. In addition, during these six years, the existence of the state educational assessment program has itself encouraged educators to change--to reexamine their teaching methods and materials, to improve their student testing programs, and to improve their ability to use data to make decisions about school programs and improvements.

Thanks are due to those Michigan educators and other citizens who assisted in the development of the performance objectives which form the basis of the objective-referenced tests and to the Michigan educators who developed the tests. The leadership of the State Board of Education in initially proposing and actively supporting the program is to be commended; as are the Governor and Legislature for their continued support.

The assessment program was designed and administered by the Research, Evaluation, and Assessment Services, Michigan Department of Education, with the assistance of the Measurement Research Center,

Iowa City, Iowa, and the advice of the Research, Evaluation, and Assessment Services Advisory Council.

This report, which describes the 1974-75 educational assessment and plans for the future, was written by the staff of the MEAP. Questions and/or comments about this report may be directed to the Supervisor, Michigan Educational Assessment Program, Michigan Department of Education, Box 420, Lansing, Michigan 48902.

John W. Porter
Superintendent of
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## INTRODUCTION

In 1969, the State Board of Education initiated the Michigan Educational Assessment Program in an effort to provide much-needed data about student achievement in the state's schools. Despite the fact that education is constitutionally the responsibility of the state government, prior to 1969 there was no reliable information available on the extent to which students in the various local school districts were learning the basic skills. The state assessment program was begun to help fill this need.

Simply stated, the state assessment program asked the question, "How are our students doing compared with what we want them to know?" To answer the question, statewide testing of fourth and seventh graders was begun and was directed primarily toward reading and mathematics.

In beginning an assessment program, one has to make some assumptions about what is being taught. The Michigan Department of Education assumed that the texts, instructional materials, and achievement tests used in Michigan schools reflected fairly well the content areas and could be used as a basis for the new assessment tests. Standardized, norm-referenced tests were subsequently developed and became a part of the educational assessment effort.

However, in 1970, a number of local school district officials challenged the use of standardized, norm-referenced tests as good indicators of what was being taught. They also questioned the instructional utility of the single summary scores being reported by the assessment program.

Thus, beginning in 1970, the State Board of Education instructed the staff to begin a clear definition of educational goals and student

performance expectations in the academic areas. Citizens, educators, students, and Department of Education staff were all involved in determining specifically what skills children should attain in Michigan schools. This process was based on the assumption that these people could--independently of any set of texts or instructional materials--define common goals and objectives for Michigan children.

The result of this process was adoption of The Common Goals of Michigan Education and publication of Student Performance Objectives in some ten instructional areas for kindergarten through grade nine. The current tests used in the Michigan Educational Assessment Program are based on these learner objectives in reading and mathematics. However, although there are twenty-two educational goals for Michigan, the state assessment program as it is presently designed basically seeks to address only the following three goals:

1) Basic Communication and Mathematics Skills
2) Sciences, Arts and Humanities
3) Physical and Mental Well-Being

To summarize, the Michigan Educational Assessment Program was begun to provide needed information on the extent to which Michigan students were achieving in school. Early versions of the program used tests which were based on an analysis of goals and objectives embedded in texts used in Michigan schools. Current versions of the tests are designed to match goals and objectives which were developed as clear statements of intent for the schools of the state. The following sections of this report describe the scope of the program, the manner in which it assesses student attainment of educational goals, and the information it produces.

## PROGRAM OBJECTIVES

The first objective of the MEAP is to provide the State Board of Education, the Executive Office, the Legislature, and citizens with data describing the levels of student basic skills attainment in math and reading, changes in those levels over time, and other relevant descriptive data about each of Michigan's schools and school districts. Given quality information about schools, these people are capable of making better decisions about school resources and operation.

The assessment program annually analyzes and reports descriptive data about each K-12 school district on twenty-two different variables such as basic skills educational achievement, racial ethnic minority status, student drop-out rate, pupil-teacher ratio, etc. These data are gathered, analyzed, and reported in such a way that it will be possible to determine yearly levels and changes in these levels as time progresses.

The second objective of the program is to provide local educators with specific information about the levels of basic skills educational attainment of students and other relevant descriptive data for their own schools and school districts. While the provision of data to local educators has always been a feature of the assessment program, the 1974-75 MEAP is continuing an effort begun in 1973-74 to concentrate on this dimension through the provision of test data for specific learning objectives. These test results are provided for each fourth and seventh grade student, each classroom school and district.

These data can be used as a basis for initial determination of strengths and weaknesses in individual pupil instructional programs and the more general curricula. More extensive data gathering and analysis may be needed, but the assessment program data can serve as a beginning point for program improvement.

The third objective of the Michigan Educational Assessment Program is to make available to parents through the local schools reliable information on fourth and seventh grader's attainment of basic math and reading skills. It is assumed that every parent has an interest in his or her child's progress in school, that such interest is in itself beneficial to the child, and that parents have the right to know how well the child is attaining a basic education. The program, therefore, makes available to the local school principal and teacher detailed and reliable test information on the attainment of selected reading and mathematics skills. The Michigan Department of Education encourages the local school staff to share this information with parents.

The objectives of the Michigan Educational Assessment Program are directed to providing relevant information to people at all levels of educational decision-making. With this effort, the Department of Education hopes to improve the education of all Michigan students, particularly those who are most in need of special state funds to improve their basic skills.

## SCOPE OF PROGRAM

### Learning Areas

As mentioned in the INTRODUCTION, the Michigan Educational Assessment Program began by addressing educational goals which were not explicitly stated but were embedded in current teaching materials. While this was the basis for determining student needs in the past, resources subsequently were provided by the Department of Education to generate a specific set of educational goals and learner objectives in answer to concerns of school officials that the standardized, norm-referenced tests then in use did not adequately reflect the curriculum of Michigan schools. Once developed, these goals and objectives became the basis for the state assessment program to begin assessing student needs with objective-referenced tests.

The Michigan Educational Assessment Program basically addresses only three of The Common Goals of Michigan Education. These three, mentioned previously, have been divided into ten instructional subdivisions:

1) Communications Skills
2) Mathematics
3) Science
4) Art
5) Music
6) Social Studies
7) Physical Education
8) Health Education
9) Foreign Language
10) Preprimary

Specific sets of instructional objectives have been constructed for each of these ten academic areas.

The Michigan Educational Assessment Program at the present time addresses communication skills (specifically, reading), mathematics, and the preprimary level. In each case, the Program only tests a subset of the minimal reading and mathematics performance objectives. In addition, developmental work is progressing for assessment in the remaining areas.

Of these ten areas, only mathematics and communications skills are programmed for every pupil testing--i.e., every pupil at certain grade levels will take a common set of test questions and an individual report of results will be provided to the local school. The other areas are proposed to be conducted on a sampling basis.

Grade Levels

The Michigan Educational Assessment Program, since its beginning in 1968, has tested fourth and seventh grade students in all of the state's 531 K-12 public school districts. The fourth grade level was selected because it is the end of the very important primary years and the seventh grade because it is the end of the elementary sequence.

First grade pupils were tested in 1974-75 for the first time in a statewide sampling procedure designed to develop a valid and reliable assessment of the preprimary objectives. Assessment at this age level is thought to be important because by law it is the beginning of the child's formal education years.

At each grade level, the assessment tests were administered in late September of the school year. This was done to permit the prompt return of the data within about six weeks.

Students Included in the Program

At the fourth and seventh grade levels, almost all students in participating schools are tested. The only exceptions are: (1) certain mentally handicapped students and (2) other students who the Local School District Assessment Coordinator felt would be completely unable to cope psychologically with competitive nature of an assessment test. All total, approximately 320,000 fourth and seventh graders take the reading and mathematics tests each year.

In addition to the public school students tested, about 16,000 non-public school seventh graders were included in the program. Testing of non-public seventh graders is supported under special provisions of the Elementary and Secondary Education Act, Title III.

The first grade assessment effort in 1974-75, however, was different than that of the fourth and seventh grade, since this was an attempt to gather data on an experimental set of tests. Instead of testing every pupil, a statewide sampling of pupils was used. Even so, because of the sampling design, about 70,000 first graders participated.

## INFORMATION GENERATED

### Resource Measures

In addition to the achievement measures in reading and mathematics, the Michigan Educational Assessment Program analyzes and reports information on several other measures. These measures describe some of the school conditions which influence the educational program and help in the interpretation of results. The human resources data shown in FIGURE I are collected and reported for every school, school district, and the entire state. The district financial resources shown in FIGURE 2 are reported for every district in the state.

FIGURE I

HUMAN RESOURCE VARIABLES

1. Professional Instructional Staff per 1,000 Pupils
2. Teachers per 1,000 Pupils
3. Average Years Teaching Experience
4. Percent of Teachers with Master's Degree or Above
5. Average Contracted Salary per Teacher

FIGURE 2

DISTRICT FINANCIAL RESOURCES

1. State Equalized Valuation per Resident Member
2. Local Revenue per Pupil
3. State School Aid per pupil
4. K-12 Instructional Expense per Pupil
5. Elementary Instructional Expense per Pupil
6. Total Current Operating Expense per Pupil
7. Total Operating Millage

In addition, the Program also reports the percent of minority students for each school, district, and the state, as well as the student dropout rate for each district and the state.

Achievement Measures

For the fourth and seventh grade reading and mathematics assessments the tests are objective-referenced in design (i.e., measure each specific performance objective). The reports provided each school district show student attainment or non-attainment of each objective tested.

For each student who participates, an "Individual Student Report" is produced which shows how he or she answered each test

question and whether or not each objective was attained.

For each classroom, the teacher is given a "Classroom Listing Report" which summarizes the performance of each student and a "Classroom Summary" which summarizes the class performance on each objective.

Each school principal receives a set of the student records for the office file and, additionally, a set of all Classroom Summaries and a summary report for the entire school.

Local superintendents receive the data for each school building and the entire district.

The statewide sample of first grade students in 1974-75 was experimental. Nevertheless, each participating student, teacher, and school received data on the objectives they tested, and state officials received the aggregated data showing the statewide performance on all of the included objectives.

Dissemination of Information

The major potential benefit of these data is the improvement of educational decision-making and education in general. In order to demonstrate the utility of the data and the means of interpreting them, the assessment program has developed a number of methods to assist local districts in utilizing the information once it has been received. Included in these are interpretive manuals, filmstrips, consultative services, briefings of local assessment coordinators, and in-depth training workshops.

In 1974-75, assessment staff members conducted fourteen workshops throughout the state. Workshop participants were given assistance in reading the various report forms and interpreting the data.

Guidelines and suggestions were offered by staff to aid in the proper utilization of the data and communication of the data to citizens and parents.

The assessment staff also routinely communicates through letters with the district superintendents and assessment coordinators in order to conduct the assessment program as smoothly and conveniently as possible. Telephone communications are also encouraged.

The main goal of the dissemination activities, whether they be workshops, interpretive manuals, filmstrips or other types of communication, is to help all levels of decision-makers to understand and know how to use the data properly.

## FUTURE PLANS

### Grade Levels

As an extension of the logic which directed the assessment program to grades one, four, and seven, current plans call for future assessements at grades ten and twelve according to the time-table shown in FIGURE 3.

FIGURE 3

TENTATIVE TIMETABLE FOR EXPANSION OF THE MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

| GRADE | School Year | | | | | |
|---|---|---|---|---|---|---|
| | 1973-74 | 1974-75 | 1975-76 | 1976-77 | 1977-78 | 1978-79 |
| 1 | | Pilot | Pilot | Pilot | X | X |
| 4 | X | X | X | X | X | X |
| 7 | X | X | X | X | X | X |
| 10 | | | Pilot | Pilot | X | X |
| 12 | | | | Pilot | Pilot | X |

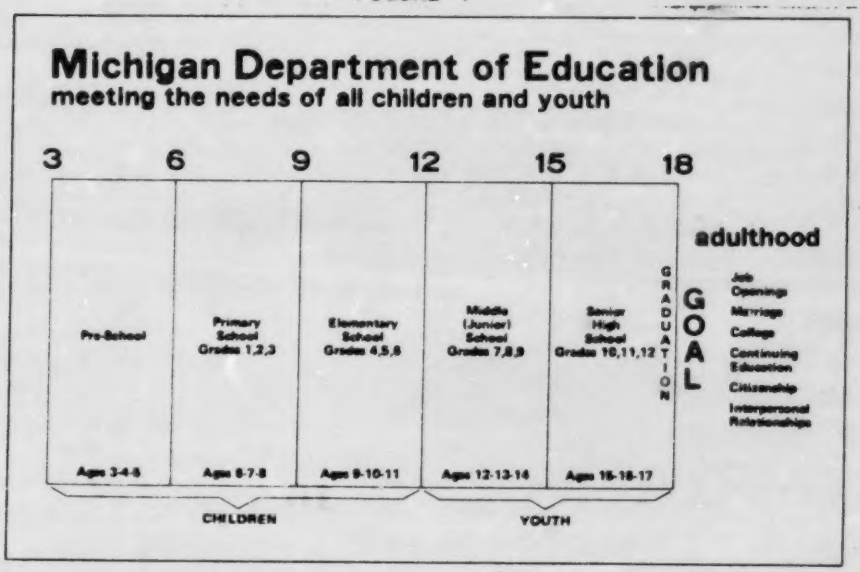
Assessment at the end of ninth grade is important because it marks the point at which the young person is about to embark on the senior high program, including specific vocational training or preparation for future education at the college level.

Assessment at the twelfth grade will permit a determination of the extent to which the state's educational system has been able to provide for the attainment of certain minimum high school competencies. The skills to be tested are thought to be necessary for a smooth transition into adulthood by high school graduates.

Preparations are underway for an experimental set of tests to be tried out at the tenth grade level, perhaps in 1975-76. Work is also progressing in the development of the minimum high school skills for use in the twelfth grade assessment with possible implementation in the next few years. These skills are being written in the areas of 1) aesthetic-humanistic appreciation, 2) personal and family management, 3) employment skills, and 4) civic and social responsibilities.

The end result of full implementation of these plans will be a state educational assessment program at each of the important ages of 6, 9, 12, 15, and 18 as shown in FIGURE 4. This informational system will then be able to assist local educators in meeting the needs of all children and youth as they prepare for adulthood.

FIGURE 4



Learning Areas

Work is progressing toward fourth and seventh grade assessments beyond the basic core of reading and mathematics objectives. Since only a portion of these objectives is currently measured, an attempt will be made to test a few new objectives each year.

Further, the staff of the Michigan Educational Assessment Program and the Instructional Specialists Program in the Department are working together to develop valid measures in academic areas beyond reading and mathematics. In 1974-75, for example, experimental science test items were pretested to prepare for their possible inclusion in future assessments on a sampling basis. Other subject areas will be treated in a similar manner as each year passes.

Information about every student in every learning area is probably not needed, and time constraints make the collection of such data impractical. Therefore, future assessments will provide for a combination of data useful for local teachers and data useful for state decision-makers. State assessments other than reading and math are scheduled to be administered on a cycling basis to permit sampling the various learning areas from year to year.

## SUMMARY

The purpose of this brief report was to describe the Michigan Educational Assessment Program and its contribution to the improvement of education in the state. The Program provides local and state educational decision-makers with necessary information on human and financial resources and student attainment of sets of performance objectives thought to be necessary for students in the state.

The educational assessment provides data useful in determining specific areas of academic need in the basic skills for individual students, classrooms, schools, and the entire state.

The Michigan Educational Assessment Program is being improved and expanded to provide even better informational services to the state's educational system in the future. More complete testing of all learning areas will be done in future years and the program will be expanded to include grades one, four, seven, ten, and twelve.

THE ULTIMATE GOAL OF THE MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM IS TO HELP ASSURE THAT ALL MICHIGAN PUPILS WILL ATTAIN THE BASIC SKILLS.

## SELECTED PUBLICATIONS OF THE MICHIGAN EDUCATIONAL ASSESSMENT PROGRAM

### 1973 Reports

Objectives and Procedures. Lansing, Michigan: Michigan Department of Education, August, 1973.

Individual Student and Classroom Reports: Explanatory Materials. Lansing, Michigan: Michigan Department of Education, October, 1973.

School and District Reports: Explanatory Materials. Lansing, Michigan: Michigan Department of Education, October, 1973.

State Summary of Results, 1973-74. Lansing, Michigan: Michigan Department of Education, no date.

Technical Report. Lansing, Michigan: Michigan Department of Education, (in press).

### 1974 Reports

Objectives and Procedures. Lansing, Michigan: Michigan Department of Education, August, 1974.

Individual Student and Classroom Reports: Explanatory Materials. Lansing, Michigan: Michigan Department of Education, October, 1974.

School and District Reports: Explanatory Materials. Lansing, Michigan: Michigan Department of Education, October, 1974.

### Other

A Position Statement on Educational Accountability. Lansing, Michigan: Michigan Department of Education, 1972.

Michigan's Educational Assessment Program: Grades to Be Assessed. Lansing, Michigan: Michigan Department of Education, January, 1974.

The Common Goals of Michigan Education. Lansing, Michigan: Michigan Department of Education, September, 1971.